

Contest 3: Market Viability

Market Appeal (50 pts):

A Jury of homebuilders will evaluate the responsiveness of the team's project to the demands of a defined target market.

The Market Appeal Jury will consider the following criteria:

- *Livability*: A livable home makes it easy to perform everyday living tasks with a minimum of effort, and a maximum of safety. The home is built to be operated and maintained efficiently and economically.
- *Buildability*: A home possessing the quality of "buildability" can be constructed efficiently and cost-effectively. Buildability is part of creative design and leads to benefits for clients, designers, and builders. Attention by the designer can help the builder achieve quality, speed, and economy when building a home.
- *Flexibility*: A flexible home design can be adapted to accommodate the range of subjective tastes, practical needs, budgets, household sizes, and demographics within the defined target market. After it is designed and built, a flexible home can be adapted to accommodate lifestyle changes.

Economic Analysis (50 pts):

A jury of experts will evaluate the economic effectiveness of the building-integrated photovoltaic (BIPV) design, and the team's ability to effectively utilize economic optimization and evaluation techniques to inform design decisions. The Jury will also evaluate the team's cost estimate of a marketable version of its competition house.

The following specific criteria will be emphasized:

- *Cost estimating*: The cost estimate of a marketable version of the prototype house and its energy systems is appropriately detailed and accurate, and is organized and reported per the requirements listed in [Economic Analysis Contest Activity Details](#)
- *Assumptions*: Significant assumptions regarding the analyses are identified
- *Simplifications*: The analyses are as simple as possible without compromising accuracy, and all significant simplifications are identified and justified
- *Improvisation*: Currently-available software tools may not contain routines for all situations. Any necessary improvisations to perform the analyses are documented and justified
- *Economic performance*: A creative and effective building-integrated approach for reducing the levelized cost of energy (LCoE) generated by the PV system is designed, implemented, and justified; opportunities to optimize the economic performance of all

house components that affect the house's overall energy performance are identified, and the effect that optimization results had on design decisions is discussed.

Project Deliverables (25 pts):

Contest Organizers will evaluate the timeliness, completeness, detail, accuracy, and overall quality, of a series of project deliverables submitted prior to the Competition. Project deliverables include [project summaries](#), project cost summaries, preliminary [drawings and specifications](#), preliminary [economic analysis and cost estimates](#), safety plan, site operations plan, [dinner menu](#), and other items identified on the Yahoo! Group Calendar as “DELIVERABLE” or “DEADLINE.”

Attendance at meetings and on conference calls and responsiveness to information requests are also considered project deliverables and will be evaluated accordingly. The Organizers reserve the right to add or remove deliverables at any time.

Code and Regulation Compliance (25 pts):

The safety officials, building inspectors, site operations staff, and members of the Rules and Regulations committee will evaluate the team's [safety practices](#), ability to expeditiously pass [building inspections](#), and compliance with [National Park Service](#) and [Competition Regulations](#) during the Event. Serious violations may be subject to an additional penalty per [Regulation 6: Penalties](#).

Contest Activity	Points Available
Market Appeal	50
Economic Analysis	50
Project Deliverables	25
Code and Regulation Compliance	25
TOTAL	150